

REMARKS

Applicant's agent wishes to thank examiner Nguyen for granting an interview to discuss the application following the Final Action dated May 24, 2005.

Please amend the application as follows:

In the claims:

Cancel claims 1, 2, 5, 6, 10-15 and 17

Amend claims 3, 7, 16 and 18 to 22.

Add claims 23 to 32

Claims 3, 4, 7, 8, 9, 16 and 18 to 32 are now in the application.

The claims have been amended to more clearly define applicant's invention and to also patentably distinguish over art cited by the examiner in the last office action dated May 24, 2005.

New claim 23 is generally similar to former claim 1. New claim 24 adds features to claim 23. New claims 25 and 26 are generally similar to claims 3 and 4 but dependent on new claim 24. New claims 27, 28 are generally similar to claims 10 and 11. New claims 29 to 32 are generally similar to claims 12 and 13.

The new claims are believed to patentably distinguish over the prior cited by the examiner in the last office action and applied under 35 U.S.C. 102 and 103. Claim 23 is believed to patentably distinguish over Strebelow (W095/26623) as applied under 35 U.S.C. 102(b). Claim 23 calls for a hydroponic growing unit having a support wall on a base, the support wall enclosing a cylindrical space. The support wall has at least one opening therein providing access to the cylindrical space. The support wall has at least one wall panel movable to open or close the

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opening, the remainder of the support wall stationary on the base. Mounting means are provided on the inner surface of the support wall, including the wall panel, for use in mounting plants within the unit.

Strebelow does not show all the above features so claim 23 is not believed to be anticipated by Strebelow. Applicant's unit has a support wall that, except for the wall panel closing the opening in the wall, is stationary on the base. The only support wall in Strebelow that is stationary is part of outer wall 5. (The cage inside this wall 5, made up of vertical posts 63 and other horizontal members, rotates on the base 4 via rollers 64 and therefore is not stationary on the base). Claim 23 calls for mounting means on the inner surface of the stationary wall. Strebelow shows no mounting means on the inner surface of the stationary wall 5 for supporting plants. The only plant support means in Strebelow are the means on the posts 63 of the rotatable cage for supporting the triangular trays. Claim 23 further calls for the mounting means to be on the inner surface of the wall panel closing the opening in the support wall. There is simply no teaching, or suggestion, of this feature in Strebelow.

In view of the features in claim 23 not shown in Strebelow, it is believed that the claim is not anticipated by Strebelow and is properly allowable under 35 U.S.C. 102 (a).

Strebelow shows a hydroponic unit in which trays carrying plants are stacked in a rotatable cage. The cage is loaded from the front and to fully load it, it has to be rotated relative to the front opening. Applicant's unit is quite different. There is no rotatable cage in applicant's unit-the support wall is stationary. And the unit has means on the inner surface of the support wall for mounting plants adjacent the inner surface of this wall. Having the plants on the surface of a cylindrical space, including the wall panel closing the opening, makes efficient use of the space and also spaces the plants equidistant

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from the center of the space. This is important when a lighting means is mounted in the center of the space. The unit is simple with few moving parts when compared with the Strebelow unit.

Claim 24 adds the feature that all the mounting means are located near the top of the wall and arranged in a circle about the wall. Strebelow does not show all his mounting means at the top of the wall but rather as being distributed evenly over the height of the rotatable cage. Applicant's mounting means are located at the top to have the plants suspended from the mounting means within the support wall. The location of the mounting means allows the blocks holding the plants to be easily placed or removed and to form an annular cylindrical structure within the support wall.

The claims are also believed to patentably distinguish over Strebelow in view of Ishimoto (US 5228235) as applied under 35 U.S.C. 103(a). Claims 23 and 24 are believed to patentably distinguish over Strebelow for the reasons given above. Claims 7 to 9 and 27 to 32 are believed to patentably distinguish over Strebelow as modified by Ishimoto. Ishimoto shows a tubular light source in the center of a cylindrical space in a hydroponic unit. The examiner states that it would have been obvious to use this central light source shown in Ishimoto in Strebelow to arrive at applicant's construction. It is respectfully submitted that it would not have been obvious to use the Ishimoto light source in Strebelow. Strebelow has his water tube in the center of his cage extending up from the base to the top of the unit. Because of this tube, and the fact that it rotates the radial arms of the tube, there is no room for a light source like Ishimotos in the center of the space. A central light source would prevent the radial water arms of Strebelow from rotating. Because of the rotating water arms, Strebelow mounts his growing lights outside the cage adjacent its periphery.

Even if it were obvious to mount the Ishimoto light in the

center of the Strebelow cage, it would still not be the same as applicant's lighting means. Applicant's lighting means employs a transparent tube open at both ends. Ishimoto does not show a tube open at both ends. Applicant's open tube allows air to pass through the tube. This both cools the light source and heats the air. Applicant also has a fan unit associated with the tube (claims 8, 29 and 31) to draw air through the tube. Ishimoto has a fan at the top of the cylindrical space for drawing air through the cylindrical casing surrounding the plants. To place his ventilating fan at the bottom of the tube would not be obvious, first, since the tube is not open, and secondly, because then he could not ventilate the entire space too well which is the primary purpose of his fan. Applicant's fan is not needed for ventilation of the entire cylindrical space since the top of the support wall is already open. applicant's open lighting tube allows air to circulate through the tube to both cool the light source within the tube and to heat the air in which the growing plants are in. Thus applicant's arrangement provides light to the plants, provides a heated growing environment, and extends the life of the light sources by cooling them during use. Ishimoto appears to disclose a closed light tube. Certainly there is no indication that air passes through the tube in Ishimoto. In view of these differences it is believed that claims 7 to 9 and 27 to 32 patentably distinguish over Strebelow when combined with Ishimoto.

Claims 21 and 22 are believed to patentably distinguish over Strebelow in view of Martin (US3458951). Applicant has a support wall enclosing a cylindrical space. Two diametrically opposed openings are provided in the enclosing support wall. Strebelow has no such opposed openings. Martin also has no diametrically opposed openings in his outer wall. The openings (158, 160) in Martin are not in a cylindrical wall nor are they opposed. If anything they are aligned or adjacent which position is quite

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different from being opposed (or opposite). 'Diametrically opposed' implies that the openings are on a circle and on opposite sides or ends of a diametrical line on the circle. Martin does not have this arrangement.

The remaining claims not discussed are dependent either directly or indirectly on claims 23 and 24 and are believed to patentably distinguish from Strebelow for the same reasons that claims 23 and 24 distinguish thereover.

Applicant's hydroponic unit is quite simple in construction, with few moving parts, and quite efficient as compared to known units. The unit allows blocks of growing material to be mounted vertically side by side to form an annular ring. The plants grow from the inside surface of this annular ring. The plants, growing inwardly from the protective support wall, are protected. The plants being equidistant from a growing light, and with each block unit having its own water feed, ensure that the plants grow uniformly. The unit allows the plants to be easily serviced through the openings while also making full use of the available growing space provided by the doors which close the openings.

The unit is believed to have obvious utility and unobvious originality over known units and is therefore believed to be properly patentable as now claimed.